

A NEW SPECIES OF THE SERRANID FISH GENUS
PLECTRANTHIAS (PISCES: PERCIFORMES) FROM
THE SOUTHEASTERN PACIFIC OCEAN, WITH
COMMENTS ON THE GENUS *ELLERKELDIA*

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Abstract.—*Plectranthias exsul*, new species, is described from six specimens collected off the Juan Fernandez Islands and from the Nazca Ridge off the coast of Chile. This new species is the first *Plectranthias* to be reported from the eastern Pacific Ocean. The distinction between *Plectranthias* and *Ellerkeldia* is discussed.

For several years we have been working on a revision of the American Anthiinae. Among the considerable material examined are six specimens of a new species of *Plectranthias* Bleeker, 1873, from the southeastern Pacific. Rather than delay description of this new species until the completion of our revision, we decided to publish the description separately.

Type-specimens are deposited in the Academy of Natural Sciences of Philadelphia (ANSP); Bernice P. Bishop Museum, Honolulu (BPBM); Museum of Comparative Zoology, Harvard University (MCZ); National Museum of Natural History, Smithsonian Institution (USNM); and Zoological Museum, Moscow State University (ZMMU). Measurements and counts were made following Anderson and Heemstra (1980).

Plectranthias exsul, new species
Figs. 1-2

Plectranthias sp., Parin *et al.*, 1981:14 (brief description of Nazca Ridge specimens).

Holotype.—ANSP 127843, 158 mm SL (standard length); Juan Fernandez islands (33°37'S, 78°49'W); Feb 1957; R. Manning, collector.

Paratypes.—MCZ 52520, 2 specimens 134 & 140 mm SL; Juan Fernandez islands; 140 to 165 m; 27 Jan 1966; R/V *Anton Brunn* Cruise 13, Stn. 35; 40' otter trawl. USNM 176577, 158 mm SL; Juan Fernandez islands (33°38'S, 78°50'W); 31 Mar 1945. BPBM 27978, 133 mm SL; Nazca Ridge (25°45'S, 85°29'W); 200 to 225 m; 1 Nov 1979; R/V *Ikhtiandr* Trawl 59. ZMMU P-16022, 150 mm SL; data as for BPBM 27978.

Diagnosis.—Dorsal-fin rays X, 15 or X, 16. Anal-fin rays III, 7. Pectoral-fin rays 16 or 17 (usually 16); dorsalmost (and occasionally ventralmost) ray unbranched, the rest branched. Branched caudal-fin rays 8 + 7. Lateral-line scales 40 to 46; scales between middle of spinous dorsal fin and lateral line 1½ to 2½. Lateral part of snout and anterior part of lower jaw naked. Maxilla naked or with very few scales. Small splint-like supramaxilla usually present. Preopercle serrate, with or without antrorse spine on lower limb. Gillrakers 8 to 10 + 18 to 21, total 26 to 31. Second soft ray of dorsal fin and one of dorsalmost branched rays of

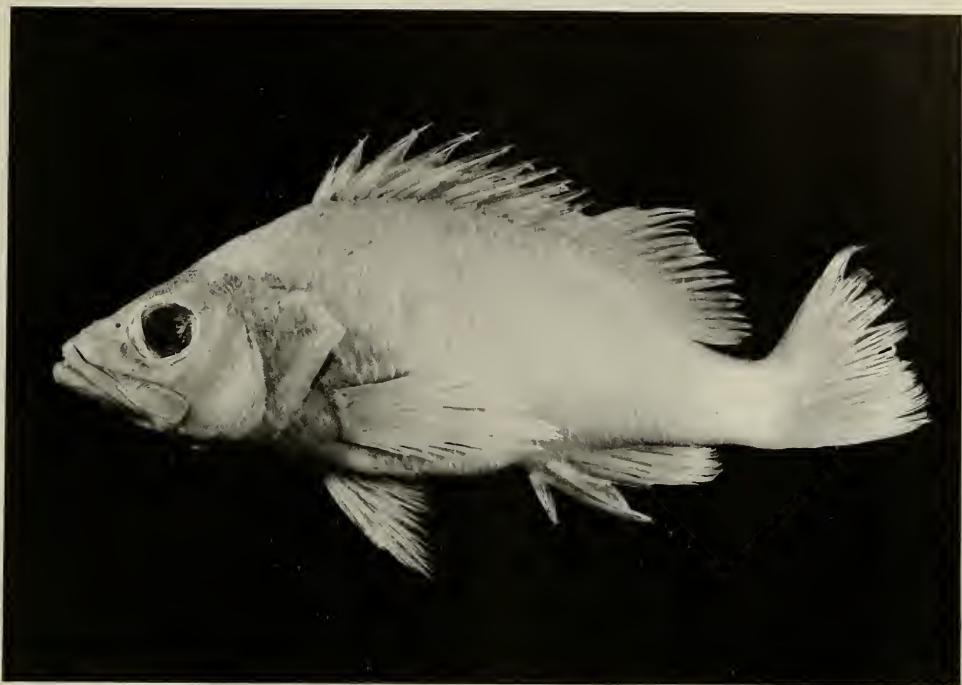


Fig. 1. *Plectranthias exsul*, holotype, ANSP 127843, 158 mm SL.

caudal fin elongate. Posterior margin of caudal fin truncate to slightly concave. Vertebrae 10 + 16. Arrangement of predorsal bones, anterior neural spines, and anterior pterygiophores of dorsal fin 0/0+0/2/1+1/1/ (using notation of Ahlstrom *et al.* 1976).

Description.—Morphometric data are given in Table 1. Dorsal fin continuous, not divided to base between spinous-and soft-rayed parts; fourth or fifth spine of dorsal fin longest, 1.6 to 2.0 times length of last spine of dorsal fin; second soft ray of dorsal fin elongate, longer than longest spine of dorsal fin. Anal fin margin subangular to slightly pointed; second spine of anal fin about twice length of first, much stouter than third; third shorter than second. Pectoral fin pointed; middle rays longest, usually reaching to vertical through base of third spine of anal fin. Pelvic fin reaching or falling well short of anus. Principal caudal-fin rays 9 + 8; procurent caudal-fin rays 9 or 10 dorsally, 7 to 9 ventrally.

Body depth 2.5 to 3.0, head length 2.5 to 2.7 in SL. Orbit 3.8 to 4.5, interorbital width 5.8 to 6.7 in head length. Maxilla reaching or almost reaching vertical through posterior border of orbit; posteroventral corner of maxilla with rounded projection. Anterior naris oblique, at distal end of short tube (posterior border of tube highest); posterior naris elliptical to subcircular. Scales ctenoid. Scales on dorsum of snout extending anteriorly on each side of naked mid-dorsal area nearly to upper lip (in one specimen anterior part of mid-dorsal area covered with scales). Interorbital region, cheek, preopercle, opercle, subopercle, interopercle, and posterior $\frac{1}{3}$ to $\frac{2}{3}$ of ventral surface of lower jaw with scales. Scales on cheek extending

Table 1.—Morphometric data for *Plectranthias exsul*. The holotype is denoted by an asterisk. Standard length is in mm; other measurements, in percentage of standard length.

Measurement	BPBM 27978	MCZ 52520		ZMMU P-16022	ANSP 127843*	USNM 176577
Standard length	133	134	140	150	158	158
Head, length	37.7	38.4	39.1	38.2	37.6	37.8
Snout, length	10.6	9.3	10.0	10.3	9.4	9.8
Orbit, diameter	9.5	9.9	10.2	8.5	9.5	8.4
Postorbital length of head	17.2	20.0	18.8	18.5	18.6	19.4
Upper jaw, length	18.3	19.6	19.6	17.5	19.0	18.7
Maxilla, width	5.2	6.3	6.2	5.0	5.7	5.5
Interorbital width	6.0	6.3	5.9	6.1	6.5	6.3
Body, depth	33.7	37.3	39.6	36.1	35.2	36.5
Predorsal length	35.8	39.9	39.3	37.0	37.9	39.5
Preanal length	70.6	64.9	66.4	70.1	64.7	66.2
Caudal peduncle, length	21.2	20.9	20.4	22.1	22.7	22.3
Caudal peduncle, depth	10.3	12.4	13.1	10.7	11.2	10.7
Pectoral fin, length	ca. 31.7	33.3	30.7	33.3	33.2	32.5
Pelvic fin, length	22.9	26.1	25.2	ca. 22.3	23.4	24.1
Anal fin, length	28.0	29.9	28.9	26.5	ca. 30.8	26.8
Upper caudal-fin lobe, length	>30.4	28.2	28.6	ca. 24.5	ca. 29.9	—
Lower caudal-fin lobe, length	22.2	23.9	26.1	ca. 23.1	ca. 24.0	—
Third dorsal spine, length	15.7	15.9	16.3	>14.8	>16.8	>15.4
Fourth dorsal spine, length	18.2	18.7	18.4	>16.7	>18.8	>16.1
Longest dorsal spine, length	18.2	18.7	18.4	>16.7	19.9	18.1
	(4th)	(4th)	(4th, 5th)	(4th)	(5th)	(5th)
First anal spine, length	9.5	9.3	8.4	8.7	9.8	8.9
Second anal spine, length	19.0	17.3	—	16.1	18.7	16.6
Third anal spine, length	>15.3	14.9	15.9	14.7	15.7	14.7

anteriorly to vertical through middle of orbit. Branchiostegal rays and membranes, and gular area naked (few scales anteriorly along midline of gular area in some specimens). Opercle with 3 spines; dorsalmost blunt and inconspicuous, middle one largest. Few to numerous small to well-developed serrae and/or irregularities on distal margins of subopercle and interopercle at or near their junction. Branchiostegal rays 7; anterior 3 inserting along ventral edge of hyoid arch, posterior 4 inserting laterally on arch. Longest gillrakers slightly longer than longest gill filaments. Pseudobranch well developed, with 23 to 31 filaments.

Proximal half of soft dorsal and anal fins scaly; pectoral, pelvic and caudal fins scaly basally; no enlarged axillary scales at base of pelvic fin. Rows of cheek scales 8 to 12. Series of circum-peduncle scales 18 to 22. No smaller auxiliary scales at bases of body scales. Lateral line complete, extending to base of caudal fin; running a few scale rows below dorsal fin parallel to dorsal body contour, curving to mid-lateral axis of body somewhat posterior to vertical through posterior end of dorsal-fin base. Lateral-line tubes simple. Scales from dorsal-fin origin to lateral line 4 or 5; scales from lateral line to anal-fin origin 13 to 17.

Upper jaw with band of very small depressible teeth; band broadest in anterior portion of jaw where inner teeth are variously enlarged into posteriorly directed conical and caniniform teeth; 1 to 3 stout exerted canines on each side near symphyseal diastema. Lower jaw with narrow band of small depressible conical



Fig. 2. *Plectranthias exsul*, paratype, MCZ 52520, 140 mm SL.

teeth; band broadened at anterior end of jaw; 1 to 3 stout exerted canines on each side of jaw near symphyseal diastema; 1 to 3 stout recurved canines on each side of jaw about one-third distance from symphysis to posterior termination of dentition; inner teeth of band somewhat enlarged; inner teeth near symphysis recurved and distinctly enlarged. Vomer and palatines with cardiform teeth; vomerine teeth in chevron-shaped patch; palatine teeth in band, anterior portion of band somewhat broadened and usually slightly curved toward vomer. No teeth on tongue or pterygoids.

Eleventh and twelfth vertebrae with ventrolateral foramina. Epipleural ribs on anterior 12 or 13 vertebrae; pleural ribs on vertebrae 3 through 10. No hypural fusions. Trisegmental pterygiophores associated with anal fin 1 or 2, with dorsal fin none.

Color.—In alcohol, body and head uniformly straw colored; color in life unknown.

Comparisons.—*Plectranthias exsul* has more lateral-line scales than any other species in the genus except *P. taylori* Randall, 1980; however, it is separated easily from *P. taylori* in having more gillrakers (total on first gill arch 26 to 31 vs. 17 or 18), fewer dorsal soft rays (15 or 16 vs. 18), and more pectoral-fin rays (16 or 17 vs. 14).

Plectranthias exsul is also similar to *P. kelloggi* (Jordan & Evermann, 1903), with which it shares the following characters: second soft ray of dorsal fin and one of dorsalmost branched rays of caudal fin elongated, similar fin-ray counts, and similar dentition. In addition to having more lateral-line scales (40 to 46 vs. 32 to 38), *P. exsul* differs from *P. kelloggi* in having more gillrakers (total on first

gill arch 26 to 31 vs. 20 to 24) and in possessing a naked or almost naked maxilla and a partially naked mandible (anterior one-third to two-thirds without scales) vs. a partially scaly maxilla and a scaly mandible.

Distribution.—*Plectranthias exsul* is known only from off the Juan Fernandez islands and from the Nazca Ridge off the coast of Chile. Depths of capture range from 140 to 225 meters.

Etymology.—The Latin noun *exsul* (meaning “exile”) is used in allusion to the eastern Pacific distribution of this species; *P. exsul* is the first species of *Plectranthias* known from the eastern Pacific region.

Remarks.—In his revision of the genus *Plectranthias*, Randall (1980) recognized 30 species, 13 of which he described as new. Five other new species have recently been placed in *Plectranthias* by Fourmanoir and Rivaton (1980), Katayama and Masuda (1980), Fourmanoir (1982), and Raj and Seeto (1983). It should be pointed out that our assignment of *P. exsul* to *Plectranthias* is based on Randall’s definition of the genus. In order to precisely place *P. exsul* or any other species currently assigned to the genus, more study, particularly of internal morphology, is needed. It seems likely that a reassessment of currently available data coupled with an analysis of new information will lead to a modification of the description of *Plectranthias* provided by Randall (1980) and to the recognition at the generic level of one or more of the eight genera subsumed by him into *Plectranthias*.

Although considerations of the limits and the diagnostic characteristics of the genus *Plectranthias* are beyond the scope of this study, we feel that a comment on the generic-level classification proposed by Randall is in order. Randall (1980: 102) considered the genus *Ellerkeldia* Whitley, 1927, to be “closely related to *Plectranthias*.” He distinguished the two genera by the “smaller scales (40 to 50 in the lateral-line series . . .)” and “the configuration of the head” being “more sharply linear” in *Ellerkeldia*. Nevertheless *Plectranthias taylori* Randall, 1980, has 40 to 41 lateral-line scales, our new species, *P. exsul*, has 40 to 46, and *E. jamesoni* (Ogilby, 1908) has 38 to 42. Judging by the available illustrations, there are several species of *Plectranthias* with head profiles as “sharply linear” as those of species of *Ellerkeldia*. Although neither of Randall’s criteria will serve to distinguish these two genera, it appears that number of vertebrae is useful. Each of the six species of *Ellerkeldia* we examined has 27 vertebrae (10 + 17), whereas all species of *Plectranthias*, for which counts are available (Katayama and Masuda 1980; Randall 1980; and the present work), have 26. Provisionally then, we accept Randall’s definition of the genus *Plectranthias* and consider it distinct from the genus *Ellerkeldia*, but are well aware that neither genus is satisfactorily defined or differentiated from related genera.

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